

## CLAIMS

We claim:

1. A method for synchronizing to a transport stream, the method comprising:  
receiving a transport stream having an unknown set of transport characteristics;  
initializing a transport stream acquisition routine; and identifying the set of  
transport characteristics.
2. The method of claim 1, wherein the step of identifying the set of transport  
characteristics includes identifying the set of transport characteristics in less than 10  
seconds.
3. The method of claim 2, wherein the step of identifying the set of transport  
characteristics includes identifying the set of transport characteristics in less than  
approximately 2 seconds.
4. The method of claim 1, wherein the step of initializing the transport stream acquisition  
routine includes initializing the transport stream acquisition routine based upon a  
manually initiated request.
5. The method of claim 1, wherein the step of initializing further includes the substeps  
of:  
determining when no transport stream has been acquired, and in response  
periodically initializing a transport stream acquisition request ; and  
the step of initializing the transport stream acquisition routine includes initializing  
the transport stream acquisition routine based upon the transport stream  
acquisition request.
6. The method of claim 1, wherein the step of initializing includes periodically  
initializing the transport stream acquisition routine of the transport stream until the set of  
transport characteristics has been identified.

7. The method of claim 1, wherein the step of identifying the set of transport characteristics includes identifying the set of transport characteristics and determining if a lock has been established with the transport stream.
8. The method of claim 1, wherein the unknown set of transport characteristics includes a bit ordering of a portion of data, wherein the transport stream includes a plurality of portions of data.
9. The method of claim 8, wherein a portion of data is 8 bits of data, and the bit ordering is one of the first bit of 8 bits of data being the most significant bit, or the last bit of the 8 bits of data being the most significant bit.
10. The method of claim 8, wherein the unknown set of transport characteristics includes a latching edge of a clock signal used to sample the transport stream.
11. The method of claim 10, wherein the unknown set of transport characteristics includes a polarity of an active logic level of an error signal transmitted as part of the transport stream.
12. The method of claim 11, wherein the unknown set of transport characteristics includes a polarity of a transport packet start signal transmitted as part of the transport stream.
13. The method of claim 11, wherein the unknown set of transport characteristics includes a polarity of a transport packet valid signal transmitted as part of the transport stream.
14. The method of claim 1, wherein the step of identifying the set of transport characteristics includes the substep determining if the framer is locked to the transport stream.

15. The method of claim 14, wherein the framer is locked to the transport stream if a predefined number of packets with a predefined start code are received.
16. The method of claim 15, wherein the predefined number of packets are sequentially received.
17. The method of claim 15, wherein the predefined number of packets are programmable.
18. The method of claim 17, wherein the predefined number of packets is stored in a register.
19. The method of claim 15, wherein the predefined start code is 47h.

20. A method for synchronizing to a transport stream, the method comprising  
setting a first transport stream characteristic register to a first value;  
setting a second transport stream characteristic register to a second value;  
determining if a synchronization indicator is received within a predetermined  
amount of time;  
repeating the step of determining for a predetermined number of times when the  
synchronization indicator is received, wherein synchronization is  
successful if a synchronization indicator is received for the predetermined  
number of times;  
changing the first transport stream register to have a third value when the  
synchronization indicator is not received within the predetermined amount  
of time, and repeating the steps of determining and repeating;  
changing the second transport stream register to have a fourth value when the  
synchronization indicator is not received within the predetermined amount  
of time, and repeating the steps of determining and repeating.

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